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Three New Species of Palearctic Tachinidae (Diptera)

By Hans-Peter Tschorsnig, Stuttgart

With 9 figures

Summary

Three new species of Palearctic Tachinidae are described: *Germaria obscuripennis* **n.sp.** from Turkey, *Labigastera latiforceps* **n.sp.** from Tunesia and Portugal, and *Cylindromyia persica* **n.sp.** from Iran.

Zusammenfassung

Drei neue Arten paläarktischer Tachinidae werden beschrieben: *Germaria obscuripennis* **n.sp.** aus der Türkei, *Labigastera latiforceps* **n.sp.** aus Tunesien und Portugal und *Cylindromyia persica* **n.sp.** aus dem Iran.

1. *Germaria obscuripennis* **n.sp.** (Figs. 1–4)

Holotype: ♂, Turkey, Prov. Çankiri, Ilgaz, 800 m, reared from *Bembecia scopigera* Scopoli (Lep., Sesiidae), 1995, leg. M. Petersen.

Paratypes: 1 ♂, 1 ♀, same data as holotype. – 1 ♀, Turkey, St. 2384, Kayseri, 2800 – 2900 m, Ala Daglari, E-side, 34 km S Yahyali, 7. VIII. 1997, leg. W. de Prins, A. Olivier & D. van der Poorten.

The types have been deposited in the Staatliches Museum für Naturkunde Stuttgart, except for one paratype, which has been deposited in the private collection of G. van de Weyer (Reet, Belgium).

Male (statements given within square brackets refer to male paratypes):

Colour and pruinosity: Body including legs black. Frontal vitta dark brown; face, facial ridge, anterior portion of parafacial, and gena (except the genal dilation) brown in frontal view. Second antennal segment and palpus dark brown (nearly black). Calypter white, its inner margin yellowish. Tegula black, basicosta brown. Wing entirely dark brown, except hyaline spots near Sc basally and distally, near R_1 basally, near crossvein bm-cu, and near CuA_2. Head and thorax covered with light grey pruinescence; dark presutural longitudinal stripes on thorax very narrow and indistinct. Abdominal tergites with basal bands of pruinescence, which cover about the dorsal $^2/_3$ each of tergites 3 and 4, and the basal half of tergite 5.

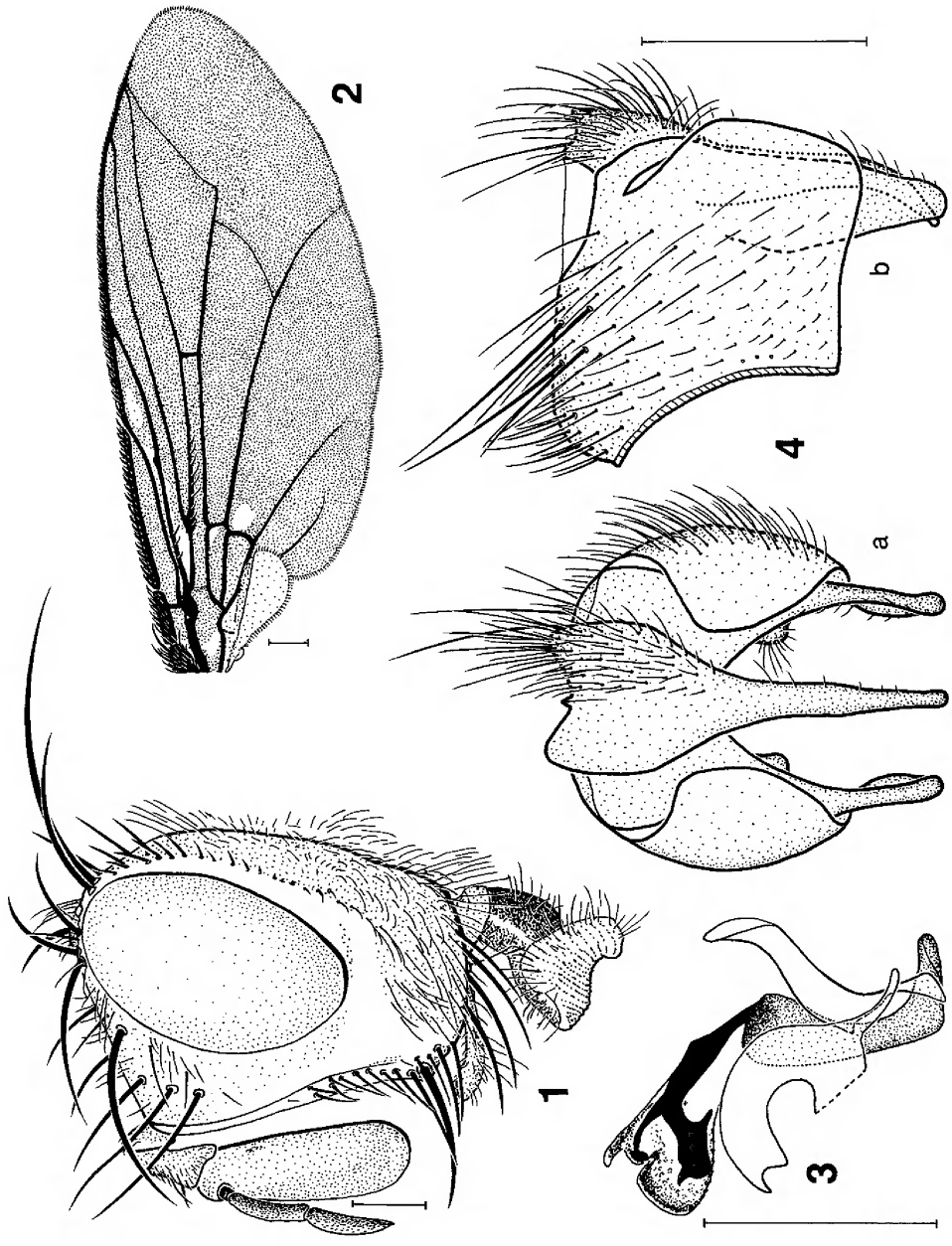
Head (Fig. 1): Eye bare. Frons at its narrowest point 1.48 [1.63] times as wide as an eye in dorsal view. Outer vertical bristle as long as $^2/_3$ of inner vertical bristle. Ocellar bristles proclinate. Frontal bristles descending to level of base of arista. Frons and frontal vitta with scattered hairs outside frontal row, one [no] hair descending below level of lowest frontal bristle. 2 proclinate orbital bristles and 1 reclinate prevertical bristle present. Parafacial about as wide as third antennal segment, bare. Facial ridge with decumbent setae on lower half. Vibrissa arising at level of lower facial margin. Lower facial margin not visible in lateral view. Third antennal segment 3.1 [2.9] times as long as second antennal segment. Arista bare, flattened, thickened to apex. First aristomere short; second aristomere elongate, as long as third aristomere. Height of gena, when seen in profile, about 0.4 times vertical diameter of eye. Genal dilation scarcely developed. Back of head covered with white hairs, its uppermost part behind the postocular row with 3 black setae on each side. Prementum short, less than 2 times as long as its diameter. Palpus well-developed.

Thorax: Prosternum and proepisternum bare. Postpronotum with 3 basal bristles arranged in a nearly straight line and one smaller anterior bristle placed between middle and inner basal bristle. Scutum with 3 + 2 pairs of acrostichal bristles, 2–3 + 3 pairs of dorsocentral bristles. 1 presutural and 2 postsutural intra-alar bristles present, the first postsutural intra-alar bristle separated by a wide distance from the suture. First postsutural supra-alar bristle strong. Katepisternum with 4 [3] bristles. Katepimeron bare or with several fine hairs. Anepimeral bristle strong, distinctly longer than strongest katepisternal bristle. Scutellum with strong basal and subapical bristles along its margin, and with strong crossed horizontal apical bristles. Dorsal surface of scutellum with the normal pair of recumbent preapical bristles, and with several pairs of straight bristles arising anterodorsal to apical scutellar bristles. Anatergite bare below lower calypter. Posterior lappet of posterior thoracic spiracle large, subcircular.

Wing (Fig. 2): Second costal section bare ventrally. Costal bristle not differentiated. R_1 with 3 [4 – 5] setae on basal third dorsally. R_{4+5} with setae on basal $^1/_2$ [$^2/_3$] dorsally, and on basal $^1/_3$ ventrally. CuA_1 bare. Bend of M nearly a right angle, apical section of M slightly concave. Fourth costal section 0.5 [0.4] times as long as sixth costal section. Section of M between crossveins r-m and dm-cu 4.0 [3.6] times as long as section between dm-cu and bend of M. Last section of CuA_1 as long as crossvein dm-cu [or slightly longer]. Wing cell r_{4+5} closed just at wing margin [with a short petiole as long as diameter of veins M or R_{4+5}].

Legs: Claws as long as fifth tarsal segment. Fore tibia with 2 posterior bristles and a complete row of anterodorsal and posterodorsal bristles; preapical anterodorsal seta as long as preapical dorsal seta. Mid tibia with 4 – 6 anterodorsal bristles, a complete row of posterodorsal bristles, 2 posterior bristles, and 1 ventral bristle. Hind tibia with 4 – 6 anterodorsal bristles, 3 – 5 posterodorsal bristles, 2 anteroventral bristles, and 3 [2] dorsal preapical setae; preapical posteroventral seta as long as preapical anteroventral seta. Hind coxa bare on posterodorsal margin.

Abdomen: Middorsal depression on syntergite 1 + 2 extending back to hind margin of that segment. Tergite 2 with 1 pair of lateral marginal bristles; tergite 3 with 1 pair of median marginal bristles and 2 [1 – 2] pairs of lateral marginal bristles; tergite 4 and tergite 5 each with a complete row of marginal bristles. Hairs on abdomen recumbent (except erect bristle-like setae on the posterior half of tergite 5). Tergite 5



Figs. 1 – 4. *Germaria obscuripennis* **n.sp.**, ♂. – 1. Head; – 2. right wing; – 3. pregonite, postgonite and aedeagus; – 4. epandrium, syncercus and surstyli, caudal (a) and lateral (b) view. – Scale: 0.5 mm.

0.7 times as long as tergite 4. Sternites overlapped by ventral edges of tergites. Hypopygium as in Figs. 3 and 4.

Body length: 11.4 [10.6] mm.

Female, differing from male as follows:

Second antennal segment brown. Abdominal tergites with basal bands of pruinescence, which cover about the dorsal half of tergites 3 and 4, and the basal third of tergite 5. Frons at its narrowest point 1.53 – 1.55 times as wide as an eye in dorsal view. Frontal bristles descending to level of base of arista or to level of lower margin of second antennal segment. Third antennal segment 1.9 – 2.0 times as long as second antennal segment. Second aristomere slightly shorter than third aristomere. Uppermost part of head behind the postocular row with 0 – 3 black setae on each side. R_{4+5} with setae on basal $^2/_3$ – $^5/_6$ dorsally, and on basal $^1/_3$ – $^3/_4$ ventrally. Wing cell r_{4+5} open or closed just at wing margin. Claws slightly shorter than fifth tarsal segment.

Body length: 9.4 – 9.9 mm.

The new species *G. obscuripennis* n.sp. does not fit into the subgenus concept of Mesnil (1944–1975: 979) because it has both proclinate ocellar bristles and proclinate orbital bristles in male. It also does not key out with Richter (1987).

G. obscuripennis n.sp. is easily recognizable by its dark brown wings and palpi. Only *G. violaceiventris* Enderlein has similar dark wings. This species however is separated from *G. obscuripennis* n.sp. by its long proboscis, protruding facial margin, short second aristomere, yellow palpi, bare vein R_1, and distinctly less pruinescence on the abdomen.

2. *Labigastera latiforceps* **n.sp.** (Figs. 5 – 6)

Holotype: ♀, Tunesia, Tabarka, 12. V. 1993, leg. G. Miksch.

Paratypes: 2 ♂♂, Tunesia, Tabarka, 11. V. 1993, leg. G. Miksch; – 1 ♂, same data, leg. F. Geller-Grimm; – 1 ♂, same data as holotype, leg. G. Miksch; – 1 ♀, Tunesia, 10 km south of Tabarka, meadow near Khathayria [Khathairia], 15 V. 1993, leg. G. Miksch; – 1 ♂, same data, leg. M. Hauser. – 1 ♂, Portugal, Prov. Faro, 6 – 8 km north of Lagos, 4. VI. 1983, leg. H.-P. Tschorsnig (as *L. forcipata* in Tschorsnig 1992: 66).

Holotype and paratypes deposited in the Staatliches Museum für Naturkunde Stuttgart.

Female (statements given within square brackets refer to female paratype):

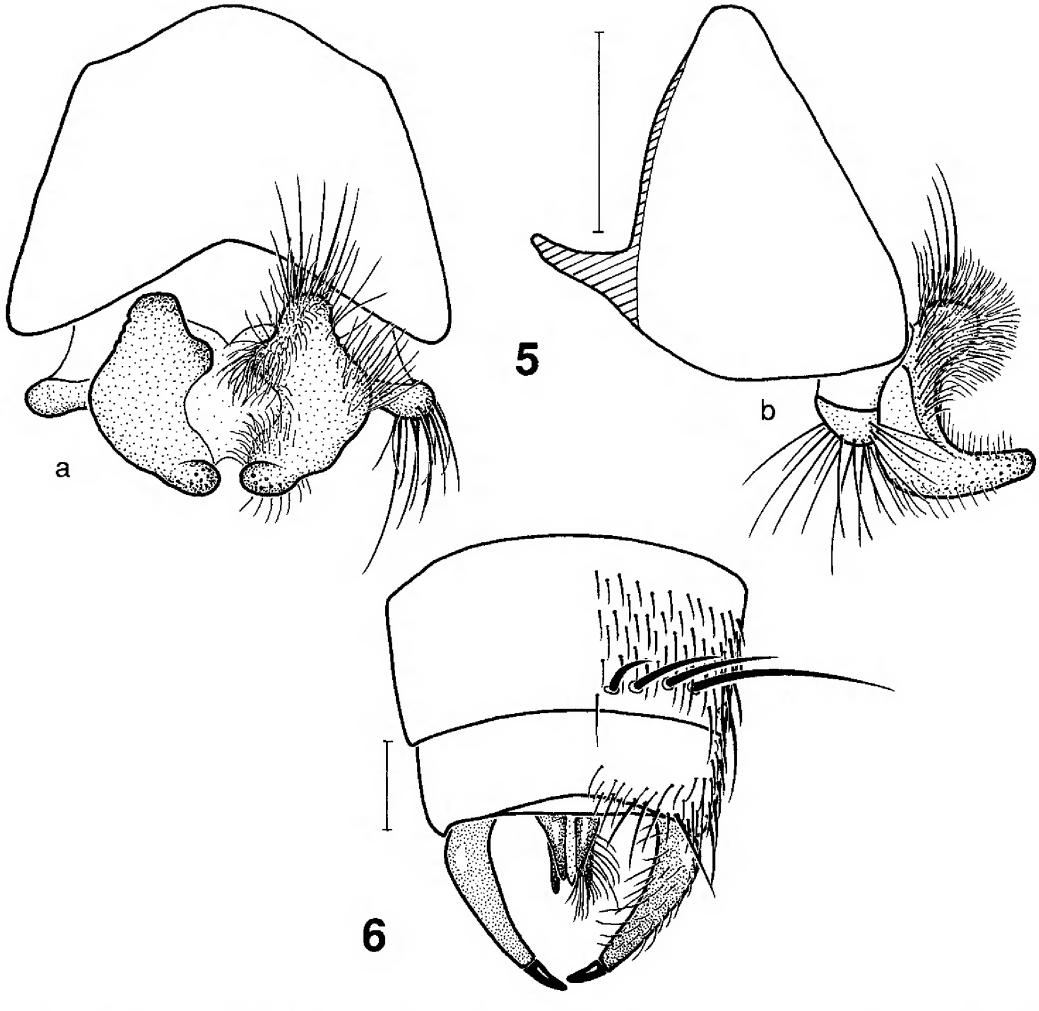
Colour and pruinosity: Body including antenna, frontal vitta, palpus, tegula, basicosta, and legs black. Halter dark brown. Calypter white, its inner margin near scutellum yellow. Head and thorax covered with grey pruinescence; scutum before suture with the normal 4 dark longitudinal stripes. Abdominal syntergite 1+2 only with traces of pruinescence; tergites 3 and 4 with a basal band of pruinescence, which covers about the dorsal $^3/_4$ of each segment.

Head: Eye bare. Frons at its narrowest point 0.79 [0.93] times as wide as an eye in dorsal view. Inner vertical bristle as long as 0.63 [0.73] times height of head, outer vertical bristle as long as $^3/_5$ [$^2/_5$] of inner vertical bristle. Ocellar bristles strong, reclinate. Frontal bristles reaching to level of first antennal segment. Frons bare outside frontal row or with a few proclinate hairs. 2 proclinate orbital bristles and 1 lateroclinate prevertical bristle present. Parafacial bare, at its narrowest point 0.8 – 0.9 times as wide as third antennal segment. Facial ridge concave in profile, with a few setae on lower $^1/_6$. Face and lower facial margin well visible in lateral view. Vibrissa as long as 1.2 [1.4] times height of face. Third antennal segment 1.8 [2.1] times as long

as second antennal segment. Arista bare, thickened on its basal $^1/_5$. First aristomere short; second aristomere not or only slightly longer than wide. Gena, when seen in profile, about $^1/_8$ [$^1/_7$] vertical diameter of eye. Back of head with several rows of black setulae and hairs behind the postocular row. Prementum about 7 times as long as its diameter. Palpus well developed, only slightly enlarged apically, with 1 or 2 setae.

Thorax: Prosternum and proepisternum bare. Postpronotum with 2 bristles. Scutum with 0 + 1 pair of acrostichal bristles, 2 [2–3] + 3 pairs of dorsocentral bristles. 2 widely separated postsutural intra-alar bristles present. First postsutural supra-alar bristle short. Katepisternum with 3 bristles. Scutellum with basal bristles, subapical bristles, and crossed apical bristles. Anatergite with a group of minute hairs below lower calypter.

Wing: Base of R_{4+5} with a strong seta. Section of M between crossveins r-m and dm-cu 2.2 [2.1 – 2.5] times as long as section between dm-cu and bend of M. Last section of CuA_1 1.3 times as long as crossvein dm-cu. Wing cell r_{4+5} open.



Figs. 5 – 6. *Labigastera latiforceps* **n.sp.** – 5. ♂ epandrium, syncercus and surstyli, caudal (a) and lateral (b) view; – 6. ♀ tergites 4 and 5 and pincers. – Scale: 0.5 mm.

Legs: Fore claws 0.7 times as long as fifth tarsal segment. Fore tibia with 2 posterior bristles and a row of 4 [5] anterodorsal bristles; preapical anterodorsal seta slightly longer than preapical dorsal seta. Mid tibia with 3 – 5 anterodorsal bristles, 3 posterodorsal bristles, and 2 ventral bristles. Hind tibia with 4 – 6 anterodorsal bristles, 2 – 3 posterodorsal bristles, 3 – 4 anteroventral bristles, and 3 dorsal preapical setae; preapical posteroventral seta absent. Hind coxa bare on posterodorsal margin.

Abdomen: Middorsal depression on syntergite 1 + 2 confined to less than anterior half of that segment. Tergites 2 and 3 each with 1 pair of median marginal bristles and 1 pair of lateral marginal bristles [holotype with an additional median marginal bristle only on left side of tergite 3]; tergite 4 with a row of 7 [6] median marginal bristles. Tergite 5 without strong marginal bristles, as long as 0.5 [0.4] of tergite 4, its anterior half polished dorsally. Hairs on abdomen recumbent. Sternites broadly exposed. Abdomen with strong pincers (Fig. 6).

Body length (including pincers): 8.2 [7.0] mm.

Male, differing from female as follows:

Pruinescence on frons and upper half of parafacial with a light golden shining. Abdominal syntergite 1+2 and tergites 3 – 5 with a basal band of pruinescence which covers about the dorsal $^3/_4$ – $^4/_5$ of each segment. Frons at its narrowest point 0.61 – 0.70 times as wide as an eye in dorsal view. Outer vertical bristle not or only slightly differentiated from the setae of the postocular row. Frons bare outside frontal row, without prevertical bristle or proclinate orbital bristles. Last section of CuA_1 0.8 – 0.9 times as long as crossvein dm-cu. Fore claws 1.3 – 1.6 times as long as fifth tarsal segment. Tergite 2 with 1 pair of median marginal bristles and 1 – 2 pairs of lateral marginal bristles; tergite 3 with 1 pair [2 pairs in the specimen from Portugal] of median marginal bristles and with 2 – 3 pairs of lateral marginal bristles; tergites 4 and 5 each with a complete row of 12 – 14 marginal bristles. Hairs on abdomen recumbent or semi-erect. Postabdomen as usual in *Labigastera*, syncercus as in Fig. 5. Body length: 8.8 – 9.8 mm.

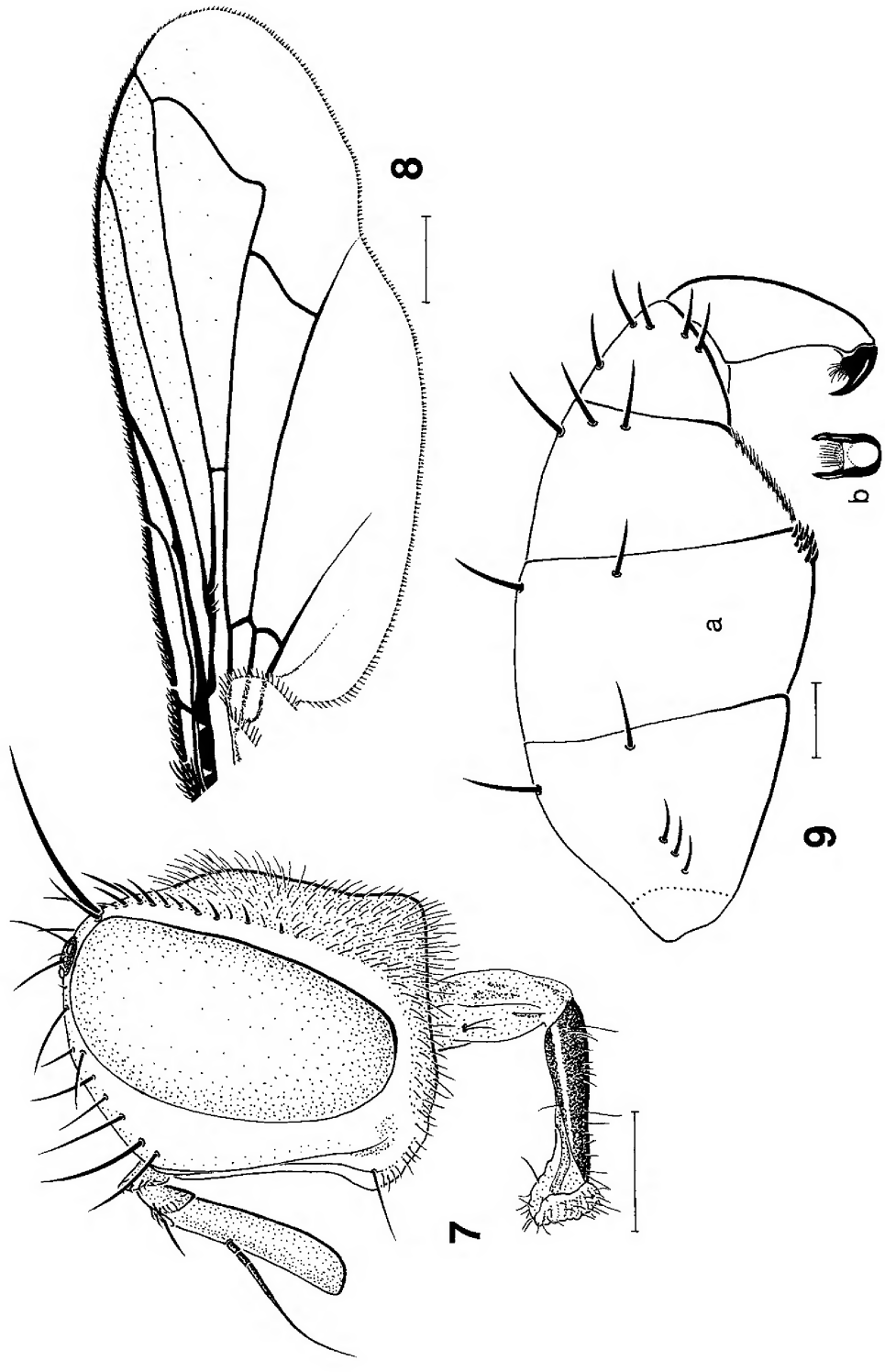
The new species *Labigastera latiforceps* n.sp. has only few marginal bristles on the abdomen as *L. nitidula* and *L. pauciseta*.

The female can easily be distinguished from all other species of *Labigastera* by its broad abdominal pincers (compare Fig. 6 in this paper and Figs. 174 – 176 of Tschorsnig & Herting 1994). The pincers are 0.68 – 0.71 times as wide as tergite 4 (measured along its anterior margin) in the new species, compared with 0.4 – 0.6 times in the other species of *Labigastera*.

The male of *L. latiforceps* n.sp. may be separated from *L. nitidula* by the ventral surface of the bend of the syncercus which has only few hairs in *L. latiforceps* n.sp. (Fig. 5), whereas it is densely haired in *L. nitidula*. The distal part of the male syncercus of *L. nitidula* and *L. latiforceps* n.sp. is digitiform, whereas it is flattened in *L. pauciseta* and *L. forcipata*.

3. *Cylindromyia persica* **n.sp.** (Figs. 7–9)

Holotype: ♀, Iran, Prov. Fars, Fort Mian Kotal, route Chiraz-Kazeroun, altitude ca. 2000 m, 8. V. 1937, leg. Brandt; deposited in the Zoological Museum of the Humboldt-University Berlin.



Figs. 7 – 9. *Cylindromyia persica* **n.sp.**, ♀. – 7. Head; – 8. right wing; – 9. abdomen, lateral view (a) and terminalia, caudal view (b). – Scale: 0.5 mm.

Colour and pruinosity: Head yellow, ocellar triangle and upper third of back of head dark brown. Frontal vitta yellow. Antenna yellow, third antennal segment slightly infuscated dorsally and on outer surface distally. Prementum dark brown. Thorax including scutellum black, postpronotum yellow. Halter yellow. Calypter white. Tegula and basicosta yellow. Wing hyaline, its anterior part dirty yellowish (up to vein R_1) and brownish (between R_1 and R_{4+5}). Coxa brown. Trochanter yellow. Femora yellow, its dorsal posterior end brownish. Tibia yellow basally, brownish distally. Tarsi black. Abdomen reddish brown, its dorsal surface dark brown; syntergite 1+2 and the anterior third of tergite 3 yellow laterally. Head and thorax covered with whitish pruinescence; scutum before suture with 4 dark longitudinal stripes, the broad outer stripes widely separated from the narrow inner stripes. A band of pruinescence present on the posterior $^1/_{15}$ of abdominal syntergite 1+2 and the anterior $^1/_{10}$ of tergite 3, and another band on the posterior $^1/_{15}$ of tergite 3 and the anterior $^2/_5$ of tergite 4 (up to $^3/_5$ dorsally).

Head (Fig. 7): Frons at its narrowest point 0.8 times as wide as an eye in dorsal view. Inner vertical bristle as long as 0.5 times height of head, outer vertical bristle as long as $^2/_5$ of inner vertical bristle. Frons bare outside frontal row. 2 proclinate orbital bristles present. Parafacial at its narrowest point slightly wider than third antennal segment. Facial ridge bare. Vibrissa as long as 0.3 times height of face. Third antennal segment 3.8 times as long as second antennal segment. Arista thickened on its basal $^2/_5$. First aristomere 1.5 times as long as wide, second aristomere 2.5 times as long as wide. Gena, when seen in profile, about $^1/_6$ vertical diameter of eye. Hairs on genal dilation and on back of head all pale. Proboscis about as long as 0.65 height of head, prementum 5 times as long as its diameter. Palpus absent.

Thorax: Proepisternum setose (1 hair on the left side, 3 hairs on the right side). Postpronotum with 2 bristles. Posterior intra-alar bristle present, strong; posterior supra-alar bristle absent. Katepisternum with 2 bristles. Basal scutellar bristles hair-like; crossed apical bristles longer than scutellum. Marginal hairs of the calypter about 2.5 times as long as the thickened part of the margin.

Wing (Fig. 8): Base of R_{4+5} with 3 hairs. Bend of M right-angled, without stub. Section of M between crossveins r-m and dm-cu 3.2 times as long as section between dm-cu and bend of M. Last section of CuA_1 0.8 times as long as crossvein dm-cu. Petiole of wing cell r_{4+5} as long as $^1/_4$ section of M beyond bend.

Legs: Mid tibia with 1 anterodorsal and 1 very short posterodorsal bristle. Hind tibia without posteroventral bristle. Fore tarsus enlarged; fourth fore tarsal segment 1.8 times as long as wide, fifth segment 1.6 times as long as wide.

Abdomen (Fig. 9): Syntergite 1+2 with 3 pairs of lateral discal bristles, 1 pair of median marginal bristles, and 1 pair of lateral marginal bristles; tergite 3 with 1 pair of median marginal bristles and 1 pair of lateral marginal bristles; tergite 4 with a row of 6 marginal bristles; tergite 5 with 1 pair of median discal bristles and a row of 8 marginal bristles. Hairs on abdomen recumbent. Syntergite 1+2 with a strong seta on its posterior ventral margin. Tergites 3 and 4 enlarged ventrally; ventral posterior corner of tergite 3 with about 10 spinulae on each side; ventral margin of tergite 4 with dense hair only. Fifth tergite 0.8 times as long as tergite 4. Sixth abdominal segment 1.4 times as long as tergite 5. Hooks of segment 6 pointed apically; piercer absent.

Body length: 6.9 mm.

Despite of the lack of spinulae on tergite 4 and the absence of pruinescence on tergite 5, the new species *C. persica* n.sp. is clearly assignable to the subgenus *Exogaster* Rondani, because the piercer of the female is absent. Couplet 4 in the key to the Palearctic species of *Cylindromyia* of HERTING (1983) may be replaced as follows:

4 Prementum about 10 times as long as its diameter. Third antennal segment about twice as long as second antennal segment. Scutellum yellow. Legs entirely yellow (except black tarsi). Pruinescence yellow. Inner and outer presutural dark longitudinal stripes on scutum fused to each other. – Female: tergite 4 with spinulae ventrally . . . ***pictipennis*** (Macquart)

– Prementum 3.5 – 5.0 times as long as its diameter. Third antennal segment about 4 times as long as second antennal segment. Scutellum black. At least tibia darkened. Pruinescence whitish. Inner and outer presutural longitudinal stripes on scutum separated from each other. – Female: tergite 4 with or without spinulae **4a**

4a Outer vertical bristle absent. Abdominal tergite 5 without discal bristles, with a band of pruinescence in its anterior dorsal half. Proepisternum with pale hairs. Tegula black. Legs entirely black. Female: ventral margin of tergite 3 without spinulae, tergite 4 densely covered with spinulae ventrally; tergite 5 longer than tergite 4, slightly longer than abdominal segment 6 . . . . . ***rufifrons*** (Loew)

– Outer vertical bristle present. Tergite 5 with a pair of median discal bristles, without pruinescence. Proepisternum with black hairs. Tegula yellow. Legs predominantly yellow. Female: ventral posterior corner of tergite 3 with a group of spinulae (Fig. 9), ventral margin of tergite 4 with dense hair only; tergite 5 as long as 0.8 of tergite 4, distinctly shorter than abdominal segment 6 . . . . . ***persica* n.sp.**

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Author's address:

Dr. HANS-PETER TSCHORSNIG, Staatliches Museum für Naturkunde Stuttgart (Museum am Löwentor), Rosenstein 1, D-70191 Stuttgart.

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